

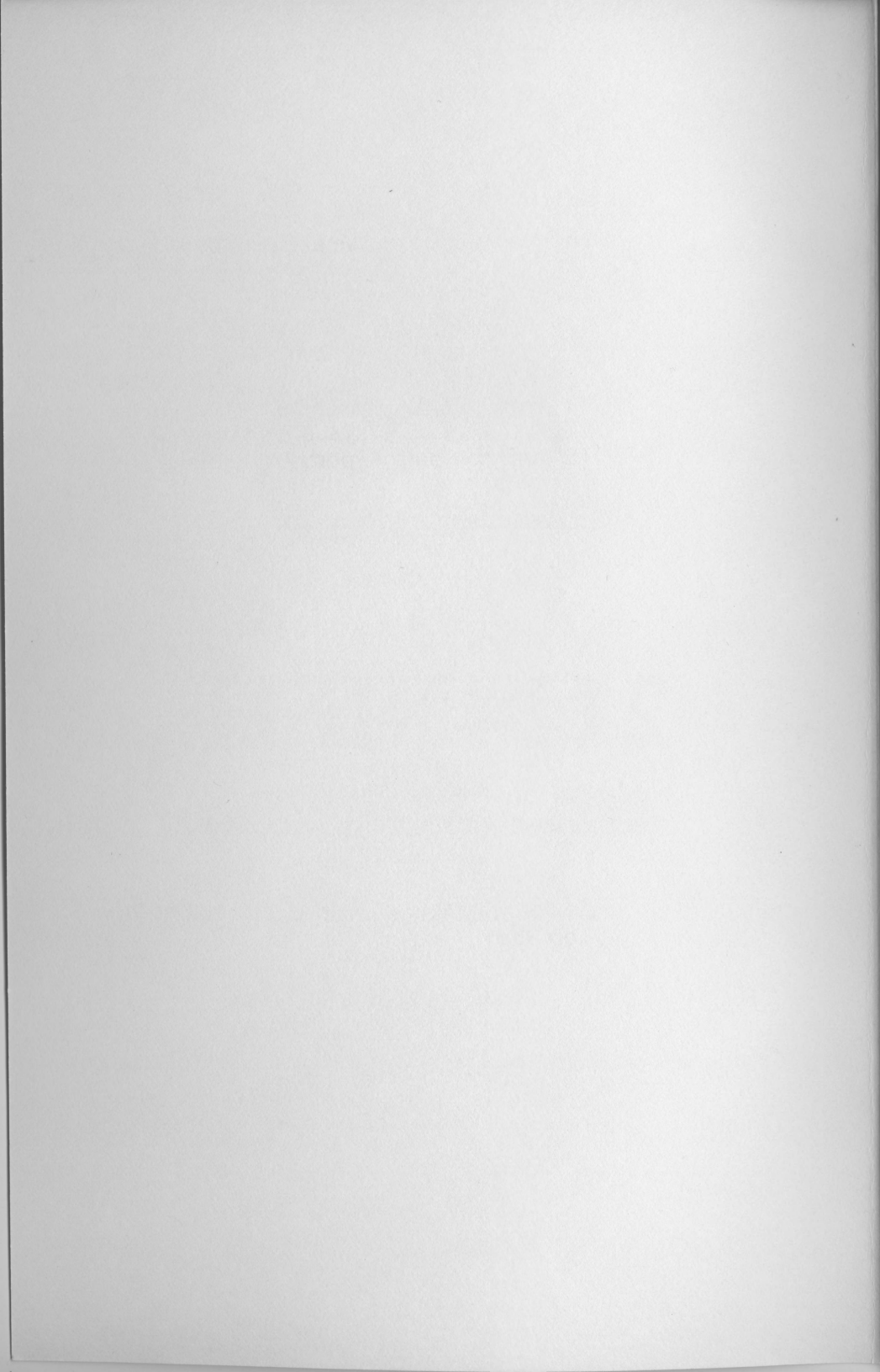


Micro Conversions, Inc.

2124NB II

**24-bit Hardware QuickDraw
Accelerated NuBus Graphics Card**

Owner's Guide



Introduction

Thank you for selecting the 2124NB II Graphics Card for your Macintosh NuBus computer. We are confident it will provide you with years of service.

The 2124NB II Graphics Card is designed to be installed in the Macintosh NuBus slot. It offers you 24-bit True-Color on a variety of 21" and smaller monitors, as well as 256 level grayscale on the Apple 15" and compatible portrait displays. The 2124NB II also offers Pan and Zoom, a special hardware design that allows you to view QuickTime movies or other detailed material at 2 and 4 times the normal size without a speed penalty.

This manual contains installation and setup instructions for the 2124NB II Graphics Card.

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FCC Information

This equipment complies with the requirements in part 15 of the FCC rules to a class A computing device. Operation of this equipment in a residential area may cause unacceptable interference to radio or TV reception, requiring the operator to take whatever steps are necessary to correct the interference.

The limits are designed to provide reasonable protection against such interference in residential situation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna of the affected radio or television.
- Increase the separation between the equipment and the affected receiver.
- Connect the equipment and the affected receiver to power outlets on separate circuits.
- Consult the dealer or an experienced radio/ TV technician for help.

Modifications:

Changes or modifications not expressly approved by Micro Conversions, Inc. could void your warranty.

Shielded Cables:

Shielded Cables must be used with this equipment to maintain compliance with FCC Regulations.

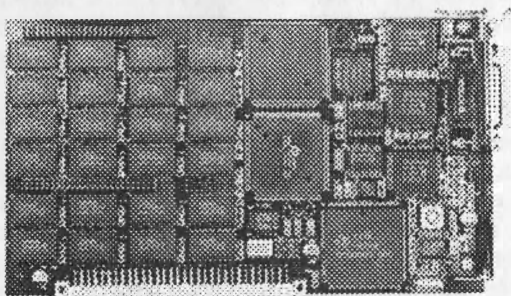
Getting Started

This manual describes the steps for installing MCI's 2124NB II Graphics Card.

- Installing the 2124NB II Graphics Card.
(Begins on page 7)
- Using MCI's software. (See page 11)
- ◆ *This manual assumes a basic level of Macintosh knowledge (i.e. copying files, start-up procedures, etc.). If terms like Double-click, Control Panel, Extensions, or System Folder are unfamiliar to you, you should review the Reference Manual supplied with your Macintosh.*

Unpacking List

Before you begin, refer to the following chart to verify that you have all the right pieces.



2124NB II Graphics Card



Software

(Appearances may vary.)

Hardware Installation For The 2124NB II Graphics Card

Installation

Follow these steps to install the 2124NB II Graphics Card in your Macintosh NuBus slot.

- 1** Turn the computer off. It is best to leave the computer plugged in as it will ground the computer and protect it from electrical damage while installing the 2124NB II.

-
- 2** Turn the monitor off.

◆ *This precaution protects the 2124NB II Graphics Card from possible electrical damage when you reconnect the system components later.*

-
- 3** Disconnect the monitor's power cable and graphics cable from the Macintosh.

-
- 4** Remove the Macintosh cover.

◆ *The exact procedure for removing the Macintosh cover depends on the Macintosh you have. (The setup guide that came with your computer provides specific instructions.)*

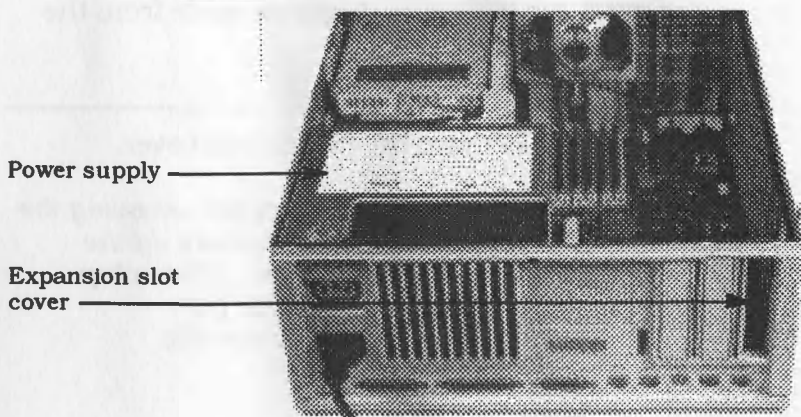
- ◆ *When installing delicate circuitry it is recommended you wear a grounding strap. If you do not have a grounding strap periodically touch the metal part of the Macintosh power supply.*

5 If you have to remove a card to install the 2124NB II you must remove it by pulling straight up on the top edge of the card. (If you do not need to remove a card, skip this step.)

- ◆ *Avoid wiggling the card as you remove it, and avoid touching the 96 pin NuBus connector on the lower edge of the card.*

6 Before installing the 2124NB II you must remove the plastic cover plate and metal shield (if present) behind the expansion slot you want to use.

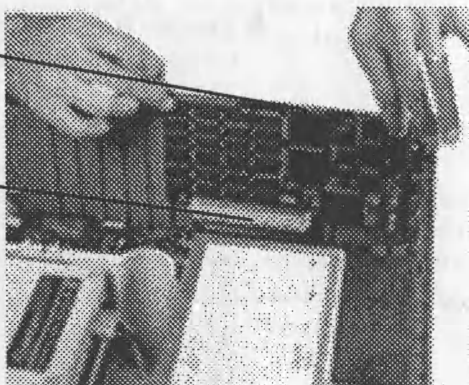
- ◆ *Expansion slot cover may differ slightly among Macintosh models.*



-
- 7** To install the 2124NB II you must hold the 2124NB II by its top edge to avoid touching the 96 pin NuBus connector on the bottom of the 2124NB II.

Top of card

96 pin NuBus
connector



2124NB II Graphics Card positioning.

-
- 8** Align the 2124NB II Graphics Card over the NuBus expansion slot.

-
- 9** Press down firmly on the 2124NB II Graphics Card until the connector is seated.

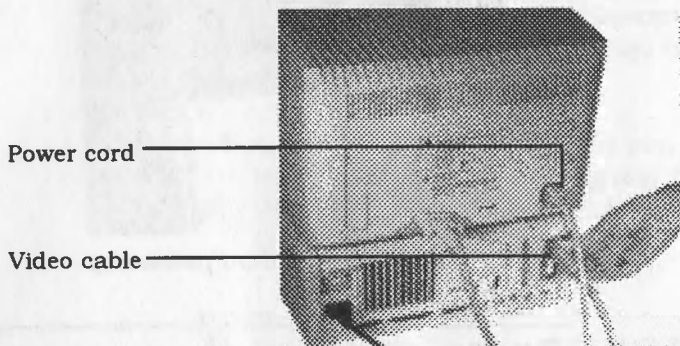
◆ *If there is a lot of resistance don't force the 2124NB II, pull it out and try again.*

◆ *To see if the 2124NB II Graphics Card is properly connected, lift it gently. If it resists and stays in place, it's connected.*

10 Replace the computer cover.

11 Reconnect the monitor.

- ◆ *Reattach the power cord to the computer and the video cable to the port on the 214NB II Graphics Card you just installed.*



Connecting monitor to computer.

12 After you have connected and secured all cables, press the on/off switch on the back of your monitor.

- ◆ *Many third party monitor cables are thicker than the Apple monitor cables. If you have a problem with the monitor cable not fitting properly try using an Apple cable to correct the problem.*
- ◆ *The next time the computer is turned on, the monitor will start up, supported by the 214NB II. Go to page 11 to install the 214NB II software.*

The 2124NB II Graphics Card Software

Before using the 2124NB II Graphics Card, you must install the software which activates the 2124NB II features.

- ◆ *Without the extension software, you will not be able to use some of the features of the 2124NB II Graphics Card. If you ever disable extensions (by holding the shift key or the mouse button down during startup) you will not be able to use all of the 2124NB II features.*

Compatible Displays

The 2124NB II Graphics Card will work with most Apple compatible monitors. In addition, it can operate standard VGA monitors and overhead projection panels (with the appropriate adaptor).

This chart shows the standard resolution & size combinations that are supported.

Monitor Size	Resolution	Refresh Rate
13"	640 x 480	67
VGA	640 x 480	60
14"	640 x 480	67
16"	832 x 624	75
15" (full-page)	640 x 870	75
19" (two-page)	1024 x 768	78
21" (two-page)	1152 x 870	75

The installation of the 2124NB II Graphics Card software starts on the next page.

Installing The Software

Installing the 2124NB II Software

Follow these steps to install the 2124NB II software on your Macintosh.

- 1** Start up your Macintosh.

- 2** Insert the software diskette supplied with the 2124NB II Graphics Card into your floppy disk drive.

- 3** Double-click on the icon of the software disk to view the contents.

- 4** Drag the HQD Accelerator icon to the System Folder. The System will place it in the proper location.



HQD Accelerator

2124NB II Control Panel Icon

HQD Accelerator Control Panel

Follow these steps to activate the features of the 2124NB II.

- 1** Choose Control Panel from your Apple menu. Your Control Panel folder will open.

-
- 2** Locate the HQD Accelerator icon, and double-click on it to open the control panel.



HQD Accelerator

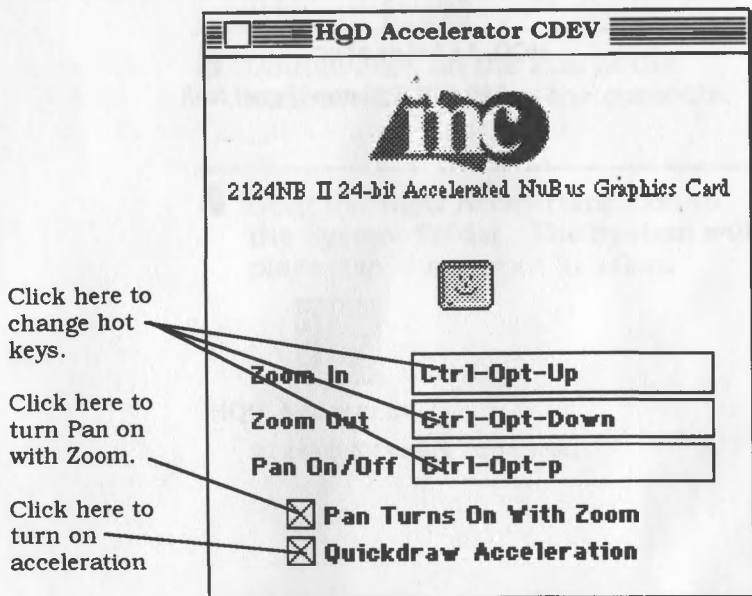
2124NB II Control Panel Icon

Using Pan & Zoom and QuickDraw™ Acceleration

The 2124NB II Control Panel allows you to set up your own Hot Keys for the Pan and Zoom features. Follow these instructions to set up the Pan and Zoom features.

- ◆ *Assign unique hot keys to avoid conflict with other programs with hot keys.*

- 3** Select Zoom In and type in your preferred hot keys. Repeat step to change Zoom Out and Pan On/Off.



HQD Accelerator Control Panel (Appearances may vary.)

- ◆ *The 15" resolutions (640 x 818 and 640 x 870) can only be zoomed to 2X the resolution, not 4X.*

Using Virtual Desktop

The 2124NB II Virtual Desktop feature allows you to use the graphics memory on the 2124NB II to provide a larger working area. When using this feature, the choice of bit-depth will change depending upon the size of monitor and desired resolution (Fig. 2).

Monitor Size	Virtual Desktop Resolutions			
	1152x870	1024x1536	2048x1536	4096x1536
13" RGB	8 bit	4 bit	2 bit	1 bit
15" RGB	8 bit	4 bit	2 bit	1 bit
16" RGB	8 bit	4 bit	2 bit	1 bit
19" RGB	8 bit	4 bit	2 bit	1 bit
21" RGB	N/A	N/A	2 bit	1 bit

Bit Depth Supported

Virtual Desktop matrix (Fig. 2)

- ◆ To select Virtual Desktop settings turn to page 18.

Selecting A Monitor

Monitors Control Panel

You may also select a monitor from the Monitors control panel. The instructions begin on the next page.

- ◆ *To use the monitors control panel, you must have the Display Manager (System 7.5.0 - 7.5.1) supplied by Apple.*

Using The Monitors Control Panel

The Monitors Control Panel

The Monitors Control Panel (*supplied by Apple*) is used to select the number of colors/grays to be displayed on your monitor.

To use the *Monitors* control panel:

- 1** Choose Control Panel from your Apple menu. Your Control Panel folder will open.

-
- 2** Locate the Monitor icon, and double-click on it to open the control panel.



Monitors

Monitors Control Panel Icon

-
- 3** The Monitors Control Panel will appear.

Click here to select a monitor setting.

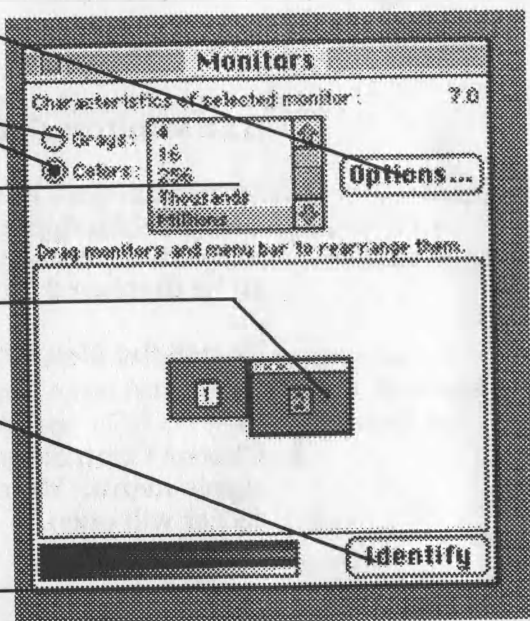
Choose Color or Grayscale modes here.

Choose bit depths here.

Position your monitors here.

Click here to identify each monitor in your system.

This is the current color palette.

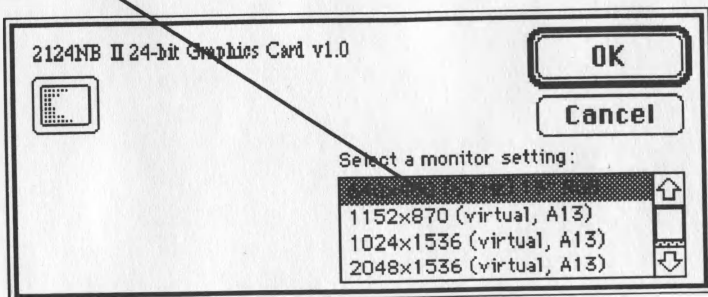


Monitors Control Panel

-
- 4** Select the options button to get the monitors and virtual desktop list.
-

- 5** The Monitors dialog box will appear. Select a preferred setting and press OK.
-

Select a monitor or virtual desktop setting here.



Selecting Modes

To change the Color or Grayscale mode of your monitor:

- 1 Click on the miniature picture of the monitor you want to adjust. Each monitor is adjusted separately.

-
- 2 Click Grays or Colors (even with a color monitor, there may be times you prefer to operate in gray scale or monochrome mode.)

-
- 3 Select how many grays/colors you want. The screen display will change immediately to reflect your choice.

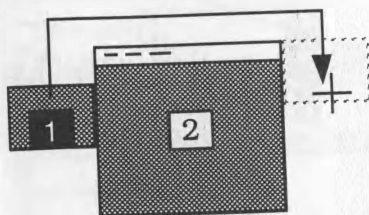
- ◆ *Your choice will vary, depending on which size / type of monitor you are using.*

Arranging Your Monitors

With your 2124NB II Graphics Card, you can use your Mac's built-in graphics as an extension of the external monitor. To do this, the Macintosh needs to know the physical position of the monitors so the mouse can move naturally from one screen to another.

You accomplish this by dragging the icons of the two monitors to match their physical position.

Drag the screen icons around to the physical layout of your monitors.



Positioning the monitors.

You can adjust the position to compensate for variances in height between monitors.

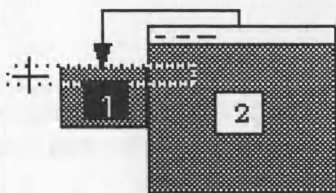
◆ If you can't tell which icon goes with which monitor, you can use the **Identify** button to display a number on each monitor that matches the small number in the control panel.

The "Main" Monitor

You can use the Monitors Control Panel to choose which monitor will contain the menu bar. This will also be the monitor where programs will appear when launched.

Simply drag the image of the menu bar to the monitor of your choice (Page 21, Fig 3).

Select the "main" screen by dragging the miniature menu bar.



Selecting the Main Screen (Fig. 3)

- ◆ You must restart the computer for these changes to take effect.

Reference

This section contains Troubleshooting tips, a chart of the 2124NB II Graphics Card pin-outs and an index.

Troubleshooting

This section gives you some suggestions for solving common problems you might encounter while setting up your 2124NB II.

There is no image on the screen

- Make sure that the computer and monitor are turned on.
- Make sure that there is power going to the monitor. The monitor's power light should be on. (Plug something else, like a radio or lamp, into the outlet to verify that it's working).
- Verify that the monitor's video cable is connected securely.
- Finally, check that the brightness and contrast controls on the monitor are not set at the lowest level.

You can not select monitors in the Monitors Control Panel

- You must have the Apple Display Manager (System 7.5.0 - 7.5.1) to take advantage of this feature. See page 16.

The Computer will not start-up

- Turn off extensions and make sure that QuickDraw acceleration is turned on in the HQD Accelerator Control Panel and restart the computer. See page 14.
- Verify that the computer is set with 32-bit addressing turned on in the memory control panel. If you do not have the choice to turn on or off 32-bit addressing in the memory control panel then your computer has a default that sets for you.

You do not have QuickDraw acceleration

- Verify that QuickDraw acceleration is turned on by using your HQD Accelerator Control Panel. See page 14.
- Verify that your extensions are turned on by simply restarting your computer. See 2124NB II software on page 14.

You do not have Pan and Zoom

- Verify that Pan and Zoom is turned on by using your HQD Accelerator Control Panel. See page 14.
- Verify that your extensions are turned on by simply restarting your computer.

If you suspect a software incompatibility

- Remove the HQD Accelerator Control Panel from the Control Panels folder. Restart the computer. Verify whether or not the problem is eliminated. You can also try turning off QuickDraw acceleration. Use the HQD Accelerator Control Panel to accomplish this.

Contact Micro Conversions, Inc.

- After you have tried all the remedies mentioned above, contact us. For quicker response, email us at mcitech@onramp.net or visit our web site at:
<http://www.microconversions.com>
This site is updated often and may contain more troubleshooting tips that were written after this manual was printed. Also you will find the latest version of your 2124NBII software. Please provide us with the model computer, type of monitor, and system software you are using. If you are reporting a software incompatibility issue, please provide us with the above information, as well as the name and version of the software you are using.
- Call us at 817-468-9922 M-F from 9:00AM to 5:00PM CST.

Pin-outs

This chart shows the pin assignments for the 2124NB II female DB15 connector.

Pin	Signal
1	Ground
2	Red Video
3	/C Sync
4	Sense 0
5	Green Video
6	Ground
7	Sense 1
8	+5v
9	Blue Video
10	Sense 2
11	Ground
12	/V Sync
13	Ground
14	NC1kB
15	/H Sync

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